Boston Public Schools
Strategies to Serve Off-Track Youth

Project Summary

May 2018

Project Overview
Our report reflects an effort that began in the summer of 2017

Data Analysis

- All data collection and analysis on this project was conducted under the terms of a **contract and non-disclosure agreement with BPS**
- BPS provided EY-Parthenon with **blinded student-level data** on all students enrolled in grades 6-12 from SY2009-10 through SY2016-17, including data related to demographics, enrollment/attendance, and performance
- We also **collected and analyzed extensive financial data** related to the high school budgets and central office spending related to high schools
- The **"off-track to graduate" definition** is based on BPS-provided student data and was confirmed with BPS as part of the project

Stakeholder Engagement

- Throughout this project, we have shared findings with and received input from a range of stakeholders, including:
  - A **~20 person Steering Committee** comprised of BPS representatives (selected from among district leadership, staff, and headmasters)
  - **BPS Executive Cabinet**
  - **School Committee members**
  - **High school leaders**
  - **The Mayor's Office**
- We also conducted **focus groups with students** to better understand experiences of high school students in Boston Public Schools

Off-Track Youth in BPS High Schools

This study relies on a definition of "off-track to graduate" that is based on students' age and credit patterns in BPS high schools

A student who is off-track to graduate is one who is at least two years off-pace relative to typical age and credit patterns of graduates in BPS high schools

Age and credit thresholds for defining off-track to graduate

Age	Credits
16	Fewer than 5.5 credits *(5.5 credits is equivalent to one year of HS on average in BPS schools)*
17	Fewer than 11 credits
18	Fewer than 16.5 credits
19+	Fewer than 22 credits

In this presentation, we use a **"cohort view"** to follow two cohorts to observe students and their outcomes **over time** (Class of 2014 and Class of 2017)

We also take a **"snapshot view"** of the **2015-16 school year** to analyze BPS' high school population at a recent, single point in time

Note: This definition has been confirmed with BPS

Note: The Class of 2017 cohort described on this page includes high school students enrolled in BPS-affiliated Horace Mann charters. The cohort view was built using BPS ODA data with guidance from DESE. For the SY2015-2016 snapshot view, a student was counted as off-track to graduate based on their age on September 1st, 2015, and credits accumulated in the prior year. A student is not included in this count if they were not enrolled within the month of September 2015

Source: BPS data; MA DESE data; BPS website; EY-Parthenon analysis

Off-Track Youth in BPS High Schools

Thousands of students in BPS high schools have fallen "off track to graduate," and this figure has not declined significantly in the past decade

A high school student who is **"off-track to graduate"** or **"off-track"** has fallen at least two years behind for his or her age

There were ~**3,300 off-track students in BPS high schools in SY2015-16,** plus thousands more who are of school age but have dropped out

18% of all BPS high school students were off track at the start of the 2015-16 school year

Ten years ago, when this study was first conducted, **20%** of all BPS high school students were off track

Source: BPS data; EY-Parthenon analysis

Off-Track Youth in BPS High Schools

The off-track to graduate population can be grouped into segments that imply different needs for students and different school models to serve them

Within the off-track population, students may be closer or further from graduation based on their age and the number of credits they have earned

"Young and far"

Students who are 16 or 17 years old and are more than two years away from graduation

SY2015-16: 1,391 students (**42%** of off-track students)

"Old and far"

Students who are age 18 or older and are more than two years away from graduation

SY2015-16: 884 students (**27%** of off-track students)

"Old and close"

Students who are age 18 or older, and are within two years of graduation

SY2015-16: 677 students (**20%** of off-track students)

"Overage late entrant EL"

Students who are English learners and enter BPS for the first time at age 18 or older

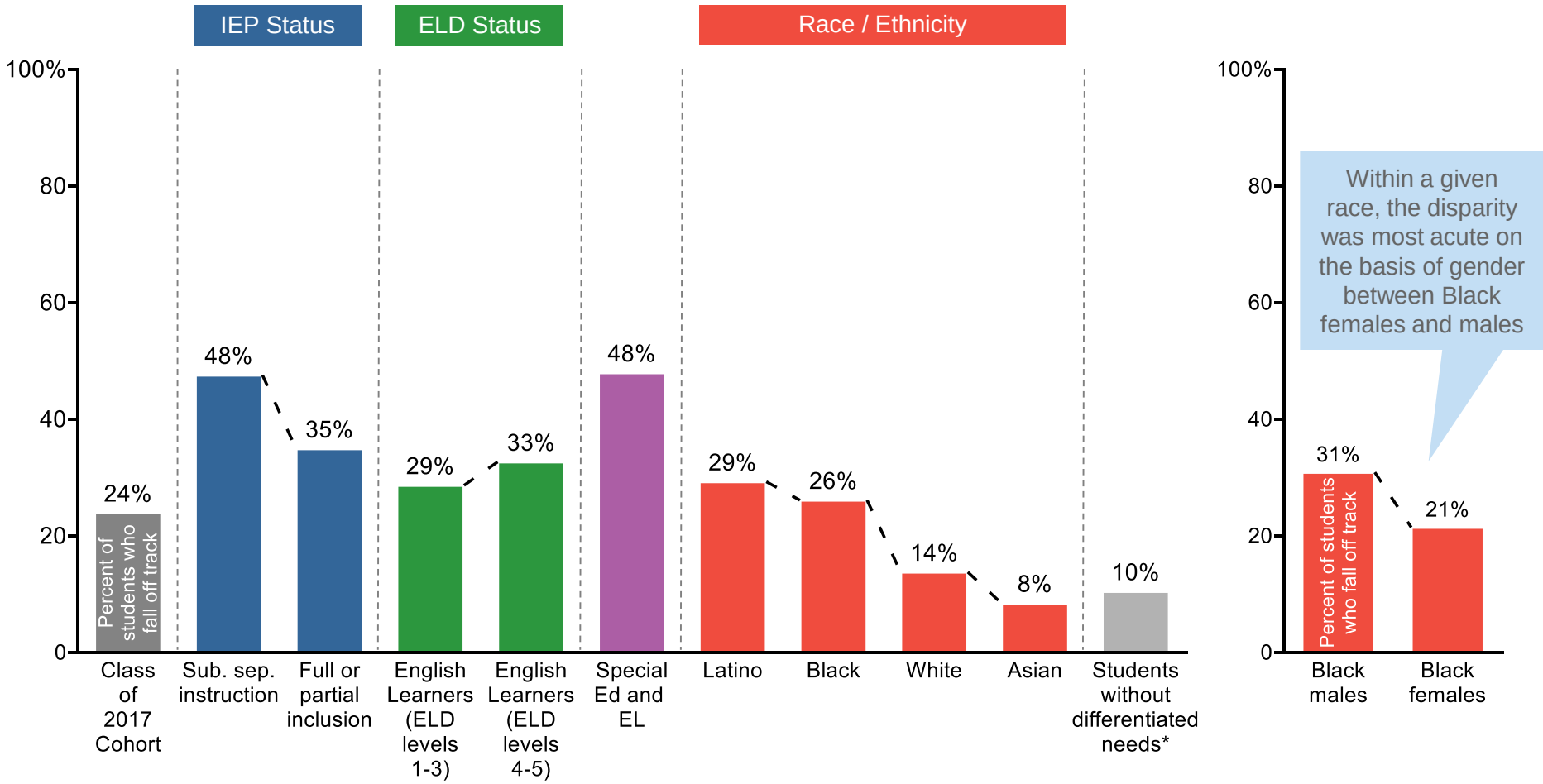
SY2015-16: 166 students (**6%** of off-track students)

Source: BPS Data; EY-Parthenon Analysis

Off-Track Youth in BPS High Schools

The population of off-track youth reflects the equity issues of the broader system

BPS high school student population by off-track status and student characteristics,
Class of 2017 cohort

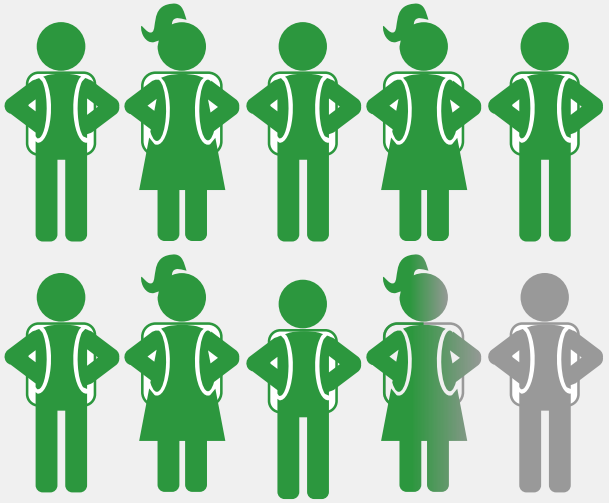


Note: Analysis reflects students' IEP status, ELD level, and self-identified gender and race / ethnicity at time of arrival to BPS; analysis excludes the 91 students who self-identified as Native American or Other, due to sample size issues; analysis excludes non-diploma bound students. *Students without differentiated needs includes all students who do not have an IEP, are not English learners, and are not eligible for free lunch. Source: BPS Data; EY-Parthenon Analysis

Off-Track Youth in BPS High Schools

Preventing students from falling off track and better serving those who do is key to making further gains in the BPS graduation rate

On-track students: graduation outcomes



84% of on-track* students graduated within four years

89% of on-track students graduated within six years

Off-track students: graduation outcomes

25% of off-track students graduated within four years

36% of off-track students graduated within six years

*Students who are on-track are those who *never* fell off track at any point in high school by the age and credit definition used in this study (two years off-track relative to typical age and credit patterns in BPS high schools, where 5.5 credits is equivalent to one year on average of high school in BPS

Note: Data is shown for the Class of 2014 cohort; analysis excludes non-diploma bound students

Source: BPS data; EY-Parthenon analysis

Off-Track Youth in BPS High Schools
Key messages

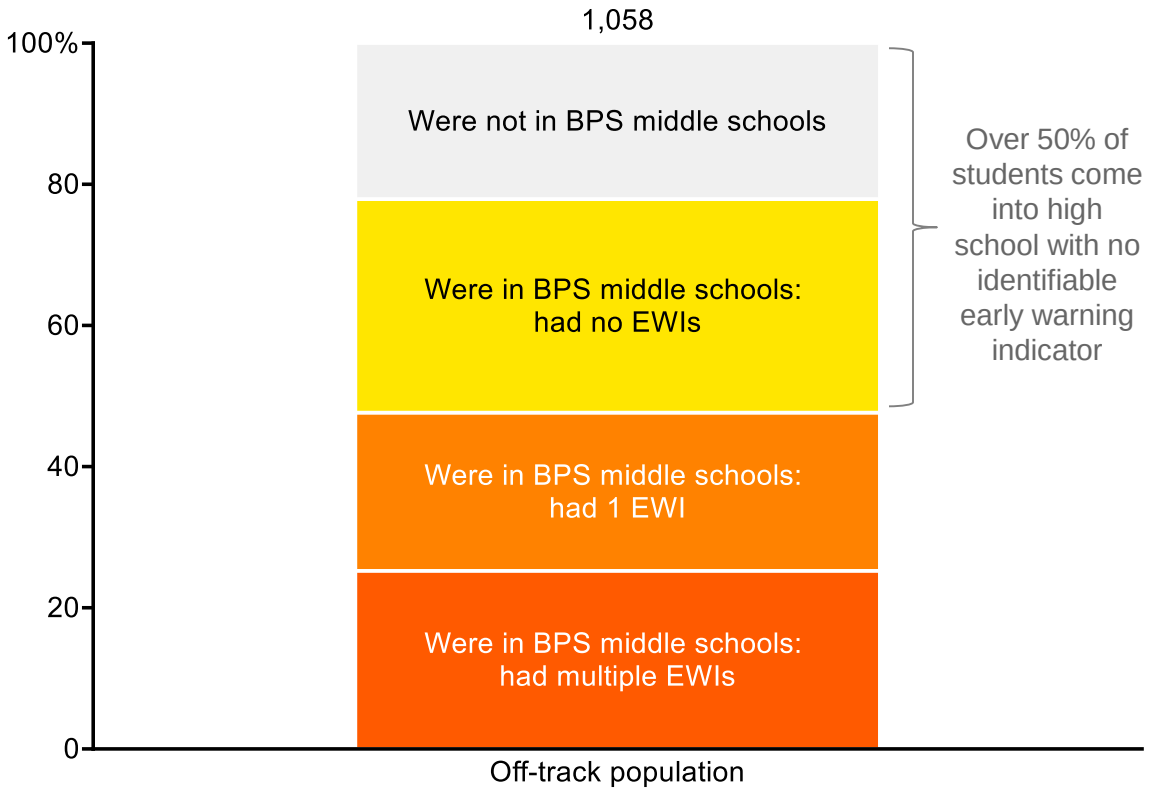
- This is a need that has to be addressed at the high school level (it also will benefit from work on middle school, elementary, early childhood – but cannot be just those things)
- Many open enrollment high schools are both under-performing and under-selected by families
- System policies like student assignment – beyond exam schools – are an important part of the challenge…
- …But individual schools can also deliver much stronger outcomes and be more effectively designed (stronger leadership, clearer accountability for student support, more rigorous instruction, etc.)
- There is a need to make it easier for students to access alternative education, and to build school models that align to their specific needs

Off-Track Youth in BPS High Schools

…the majority of off-track HS youth have no identifiable early warning indicator

Off-track population by early warning indicator status

Class of 2017 cohort



"Early Warning Indicators" (EWIs)* are factors students display in the 8th grade:

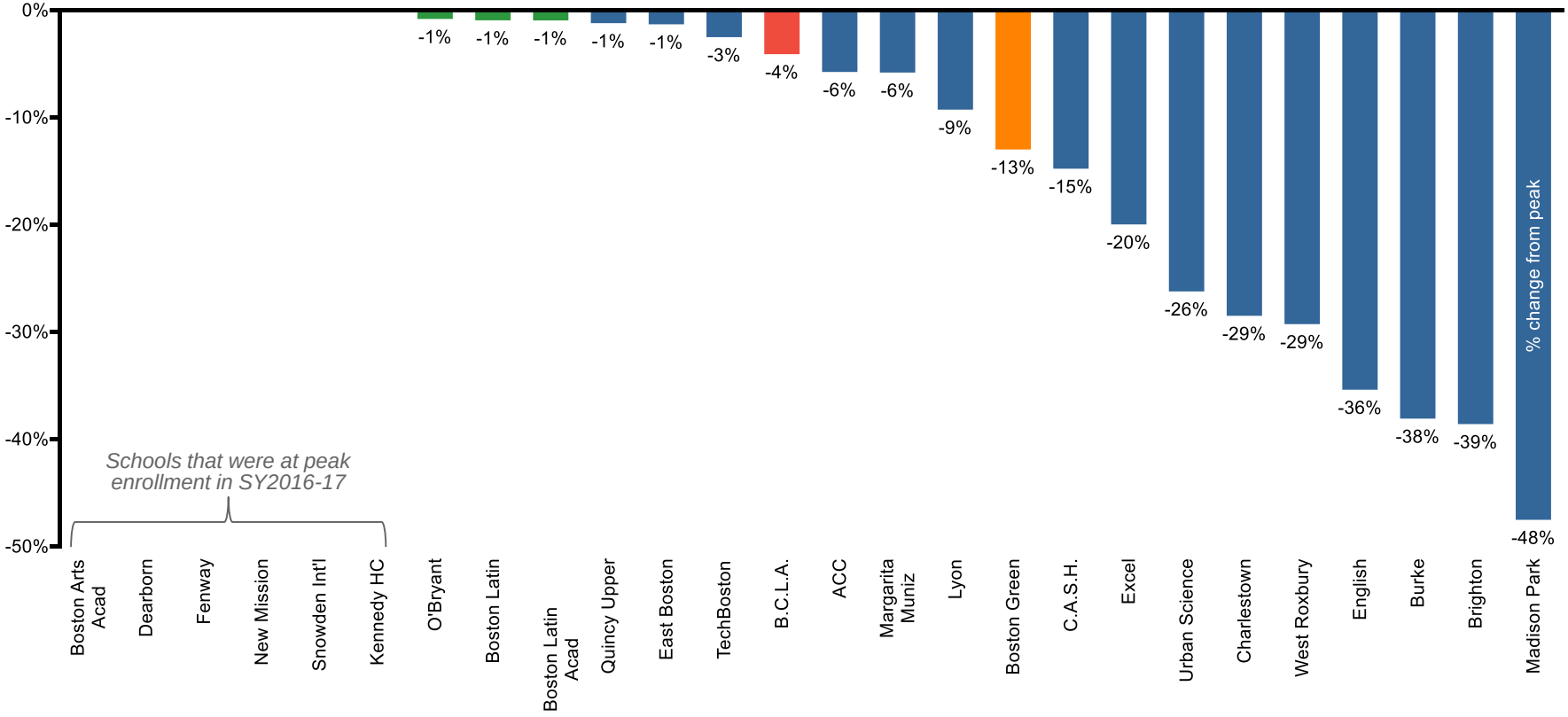
- **Attendance:** Less than 85% attendance
- **Discipline:** 1 or more days suspended out-of-school
- **Core course failure:** 1 or more core courses failed
- **MCAS:** Warning level on both 8th Grade MCAS

*Note: 1,058 students fell off track in the Class of 2017 cohort, which had 4,417 diploma-bound students; analysis excludes non-diploma bound students; core course failures include English or math course failures. Source: BPS Data; Parthenon Analysis

Off-Track Youth in BPS High Schools

Many open-enrollment schools have experienced sharply declining enrollment

Peak high school enrollment v. recent enrollment,
throughout SY2008-09 – SY2016-17



	Boston Arts Acad	Dearborn	Fenway	New Mission	Snowden Int'l	Kennedy HC	O'Bryant	Boston Latin	Boston Latin Acad	Quincy Upper	East Boston	TechBoston	B.C.L.A.	ACC	Margarita Muniz	Lyon	Boston Green	C.A.S.H.	Excel	Urban Science	Charlestown	West Roxbury	English	Burke	Brighton	Madison Park
Recent enrollment (SY16-17)	447	146	360	320	439	359	1,129	1,630	1,167	218	1,480	585	496	223	284	125	291	342	524	430	867	487	537	488	797	818

Open enrollment schools | Selective schools with applications | Lottery admissions schools | Exam schools

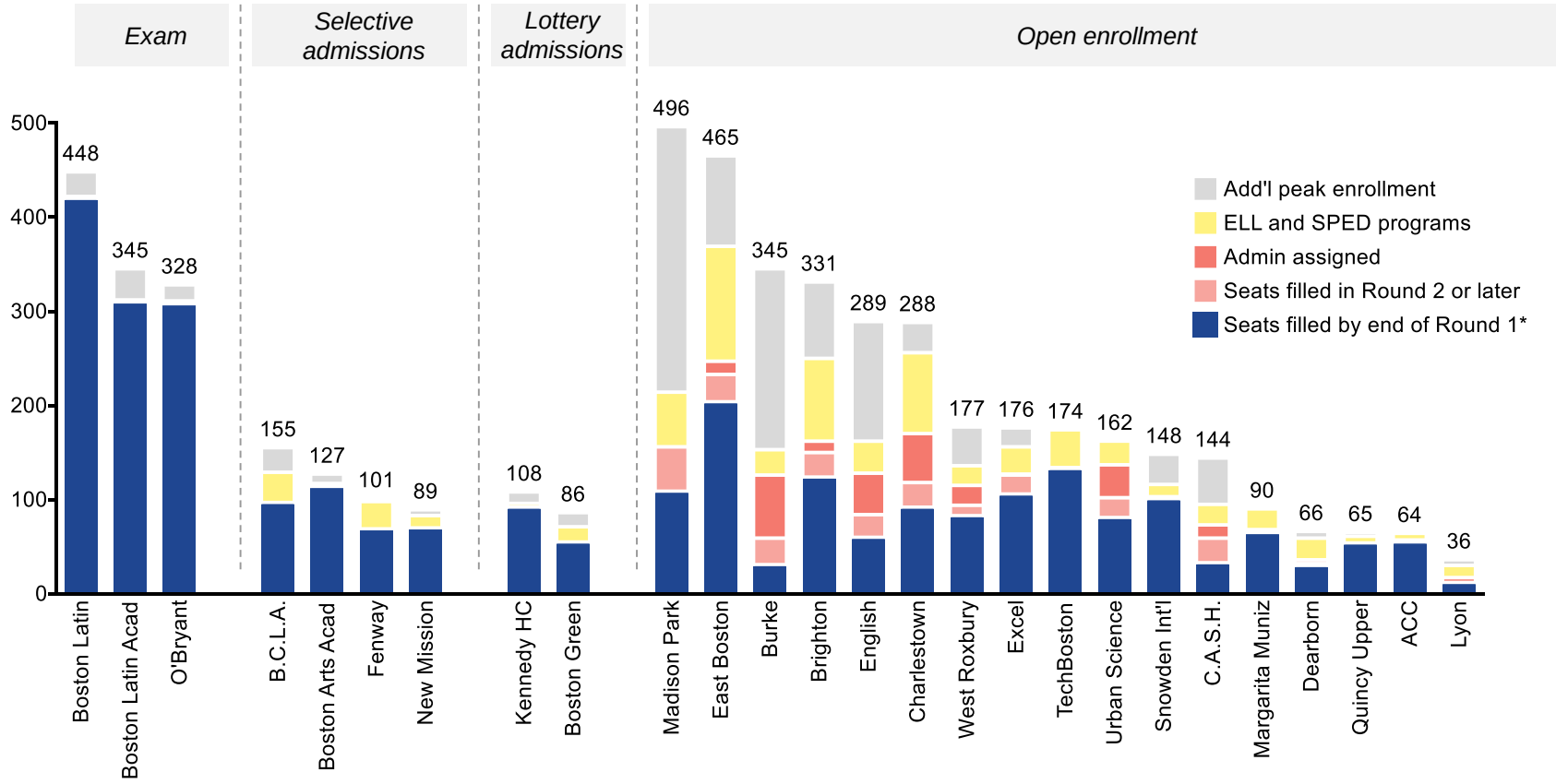
Note: In DESE data reports; Newcomer's Academy is included within Boston International; current enrollment is measured in September, BINCA's peak enrollment doesn't occur until later in the year, so they are excluded from this analysis; from SY2015-18, Burke and Dearborn shared a building, which could affect Burke's enrollment numbers; however, enrollment at the school was declining at ~4% per year prior to co-location and the schools will occupy separate buildings in fall 2018

Source: BPS data; DESE Data; EY-Parthenon analysis

Off-Track Youth in BPS High Schools

Many schools with the highest need are under-selected by families, relying on special programs and later rounds for enrollment

Peak 9th grade enrollment v. entering 9th graders by assignment,
SY2008-09 – SY2015-16



First round enrollment as % peak enrollment	94%	90%	94%	63%	90%	68%	79%	85%	64%	22%	44%	9%	37%	21%	32%	47%	60%	79%	53%	68%	23%	76%	45%	83%	89%	33%

*Indicates that a student received any school ranked in Round 1, and does not necessarily reflect if this school choice was in a student's Top 3 ranking

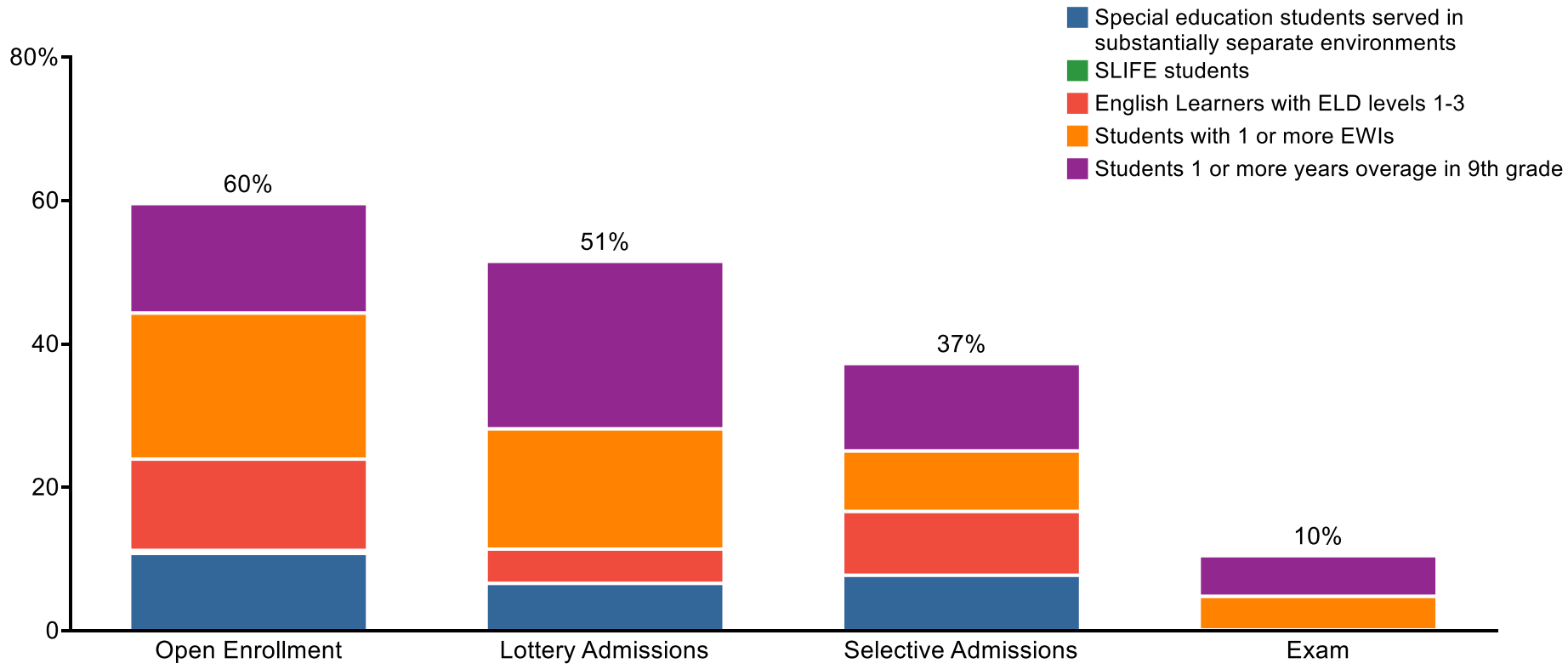
Note: "Peak" enrollment is here defined as the maximum **9th grade** enrollment a school has experienced over the past decade; school assignment data is shown for first-time 9th graders as of September 2015, and therefore does not include late entrants or repeating 9th graders; the September snapshot does not accurately reflect enrollment at BINCA, which receives many late entrants, so it is excluded from this analysis; beginning in SY2015, Burke and Dearborn have shared a building – this co-location could affect Burke's enrollment numbers, though enrollment at the school was declining at ~4% per year prior to co-location and the schools will be in separate buildings beginning in SY2018-19

Source: BPS data; DESE Data; EY-Parthenon analysis

Off-Track Youth in BPS High Schools

BPS high schools are stratified in the populations they serve, with open enrollment high schools serving a high concentration of need

Demographic profile of the total entering 9th grade class,
Snapshot view,
SY2015-16



	Open Enrollment	Lottery Admissions	Selective Admissions	Exam
# students w/ differentiated needs	1,534	86	159	109

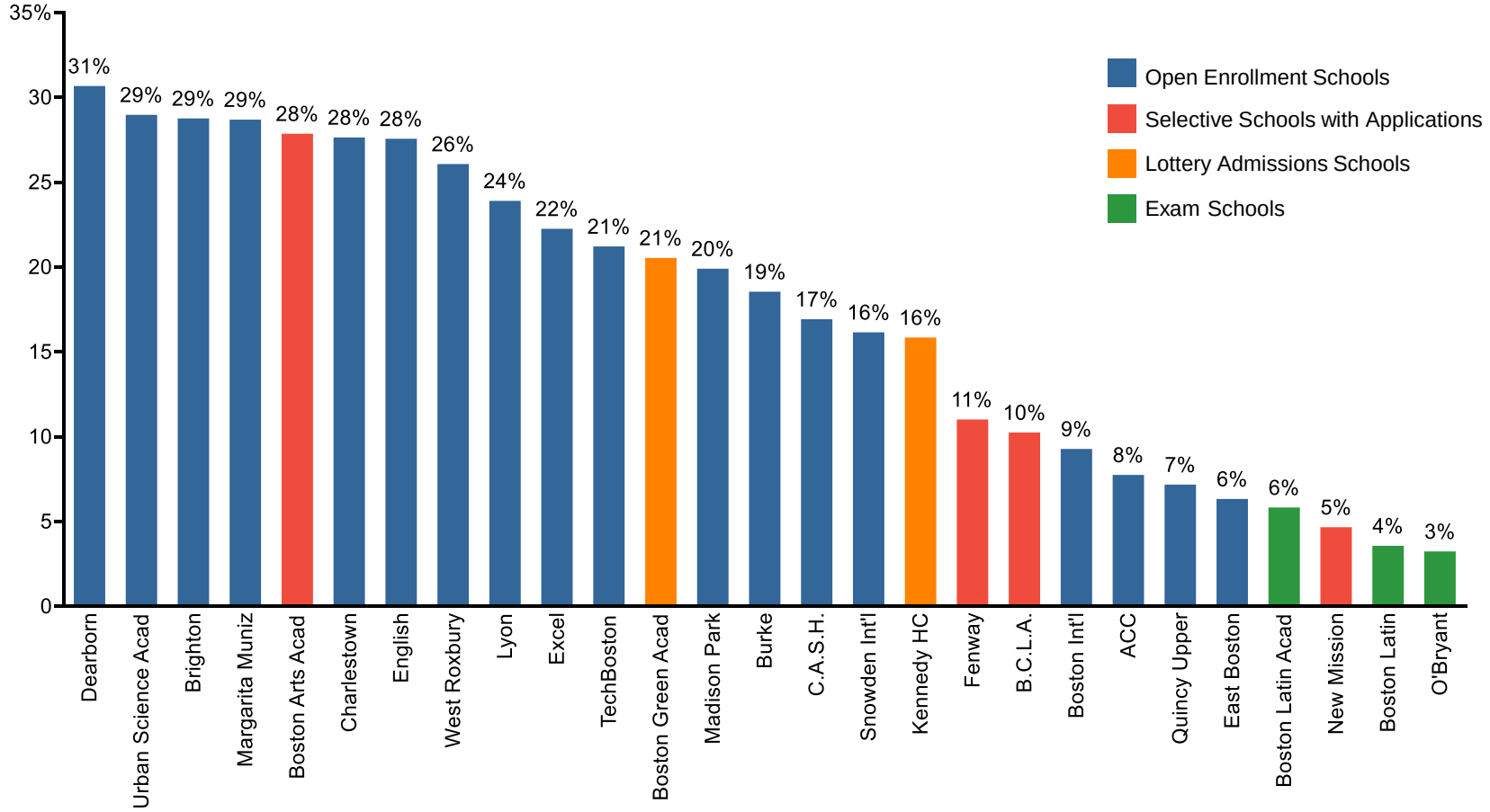
Note: Analysis only considers students who were first-time 9th graders in SY2015-2016; students with multiple unique needs are assigned to only one category based on the hierarchy as ordered in the legend above

Source: BPS Data; Parthenon Analysis

Off-Track Youth in BPS High Schools

Many BPS high schools are transferring a large share of their total students to other schools in the district

Percent of students transferred from 9th grade school,
Class of 2017 cohort



Note: All transfer and graduation rates shown are 4-year outcomes of Class of 2017 students who were enrolled in the given school as first time 9th graders in 2013-14 and who attended a BPS school for 8th grade; while BPS classifies Lyon as a special populations school, 50% of the school's seats are open enrollment while the other 50% are special education; we therefore include them as an open enrollment school; Source: BPS Data; Parthenon Analysis

Off-Track Youth in BPS High Schools

We can estimate the odds of graduation for any student in a BPS high school based on the district's current performance ...

Illustrative at-risk student

- Age 14 in 9th grade
- Fails a core course in 8th grade
- Receives an NI or higher on MCAS exams
- Has average attendance (93%)
- Has no out-of-school suspensions

The regression analysis suggests this student had a 70% chance of graduating in four years in an average BPS high school

Note: "Average" BPS high school is defined as a school with a first-time 9th grade class in which ~28% of students who were in BPS for 8th grade have at least one EWI, the average among open enrollment, selective, and exam schools in the fall of SY2015-16

Source: BPS Data; Parthenon Analysis

Off-Track Youth in BPS High Schools

… and also see that the composition of the school *can* have a large impact on a student's odds of success

Expected four-year graduation rates by concentration effects at 9th grade school

School A
Minimum % with EWIs: ***~5%***
Expected graduation rate: **85%**

School B
Low % with EWIs: ***~20%***
Expected graduation rate: **77%**

Illustrative at-risk student

- Age 14 in 9th grade
- Fails a core course in 8th grade
- Receives an NI or higher on 8th grade MCAS exams
- Has average attendance (93%)
- Has no out-of-school suspensions

School C
High % with EWIs: ***~35%***
Expected graduation rate: **65%**

School D
Maximum % with EWIs: ***~50%***
Expected graduation rate: **52%**

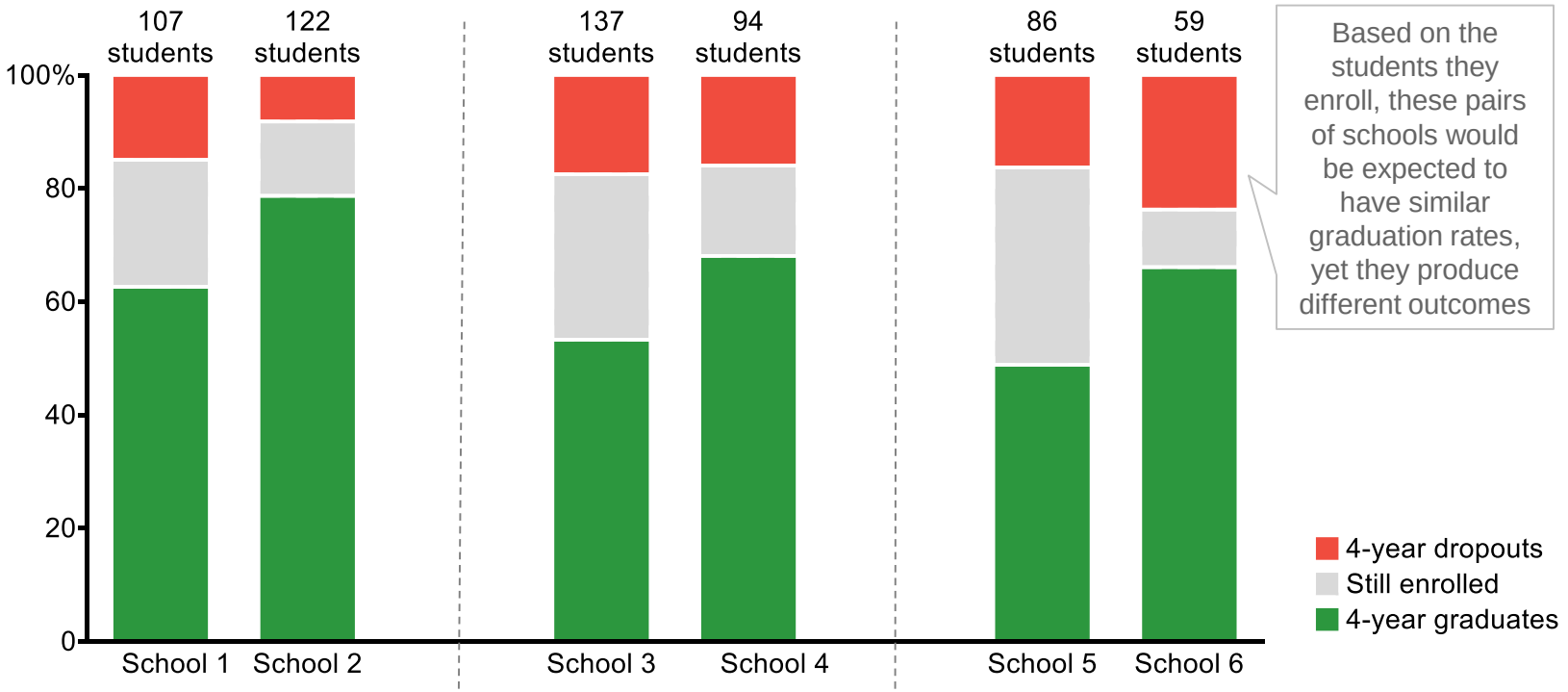
The same student would be expected to have very different graduation outcomes in different school settings based on the current design of schools in BPS

Note: All school profiles shown here reflect the concentration of students with EWIs who were enrolled in BPS in 8th grade and who are in the 9th grade classes of actual BPS high schools in SY2015-16; Source: BPS Data; Parthenon Analysis

Off-Track Youth in BPS High Schools

Some schools are producing strong, differentiated outcomes versus peer schools with similar student bodies

Actual cohort four-year graduation outcomes by 9th grade school,
Class of 2017 cohort



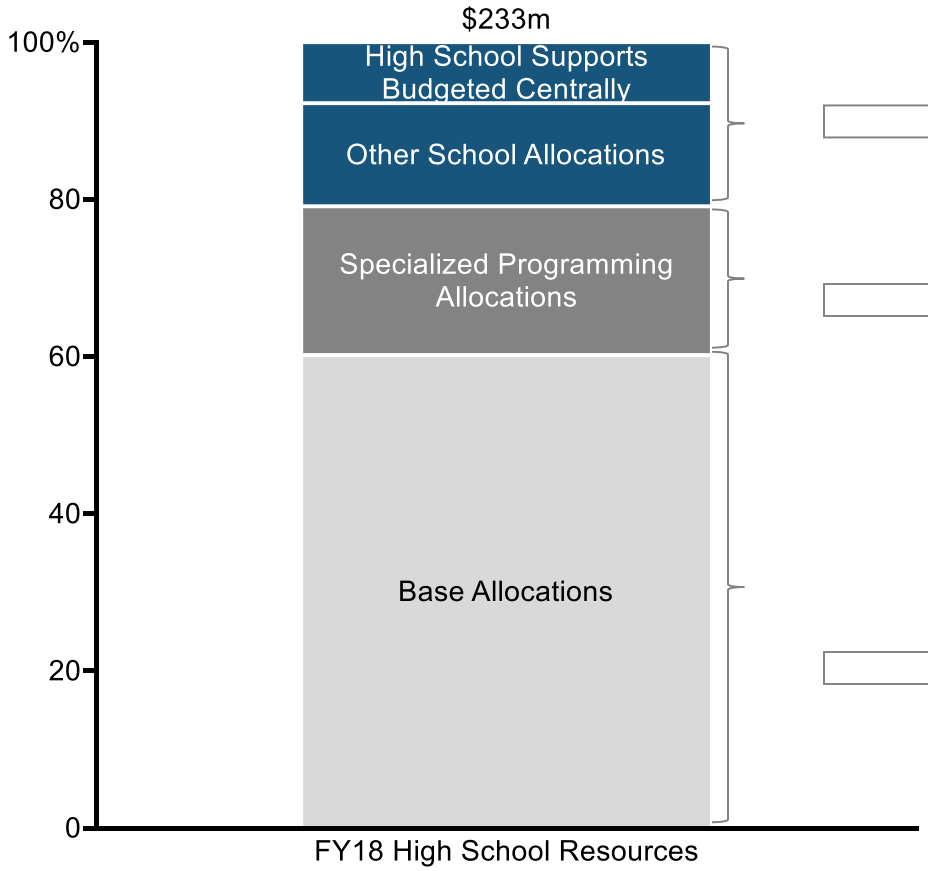
	School 1	School 2	School 3	School 4	School 5	School 6
Predicted cohort graduation rate	69%	68%	62%	62%	56%	58%
Actual cohort graduation rate	63%	79%	53%	68%	49%	66%

Note: All data are shown for students in the Class of 2017 cohort who were enrolled in BPS in 8th grade and in the respective high school as first-time 9th graders in the fall of 2013
Source: BPS Data; Parthenon Analysis

Off-Track Youth in BPS High Schools

Today, BPS spends ~$230m on high schools, of which there is a ~$50M pool where BPS has the greatest discretion in making allocations

BPS high school funding,
FY18



"Supplemental Resources": $48m

- Includes all additional funding allocated directly to schools, plus Central Office support provided directly to schools and students
- *These funds are where BPS has the greatest level of discretion. All allocations and spending in this category reflect policy decisions made within the district*

Specialized Programming Allocations: $44m

- **Highly differentiated based on student need**
- Includes special education, ELD, and SLIFE allocations based on the projected number of seats in specialized programs, as well as Nurse and COSESS allocations
- *These items are considered to be essential to the school because schools have to comply with the terms of IEPs, regulations under IDEA, and service requirements for ELD students (including DOJ requirements)*

Base Allocations: $140m

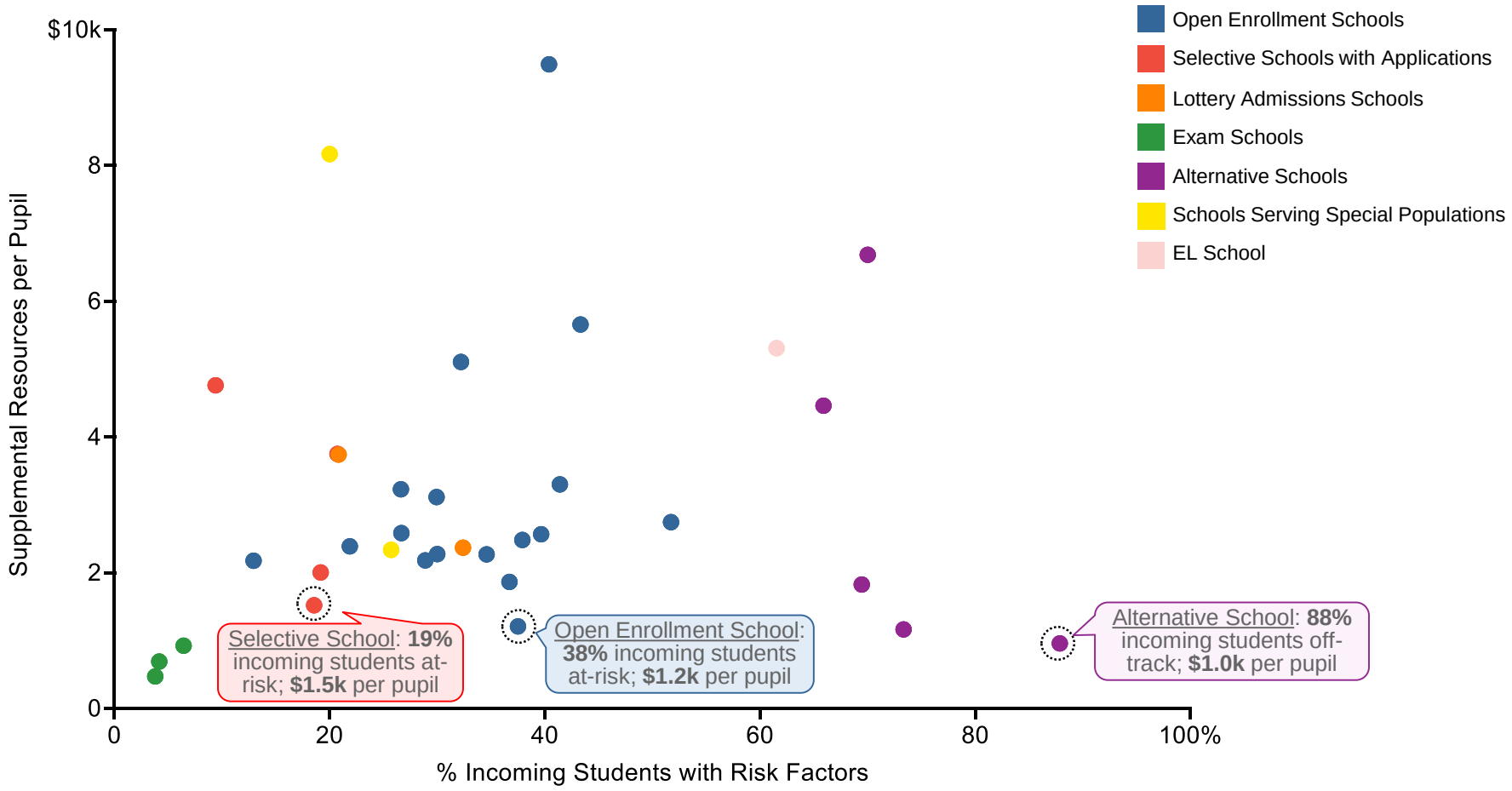
- **Standard across all high schools**
- Includes foundational allocations ($210K per school) plus the base WSF allocation made on the basis of grade level
- *These allocations are considered to be essential because they are funding the core staffing and operational needs of all schools, though we recognize the flexibility of these dollars may vary from school to school*

Note: Specialized programming allocations include: WSF allocations tied to special education seats, ELD seats, and SLIFE seats, as well as IDEA allocations, additional SLIFE support, and Nurse/COSESS allocations; Other school allocations include all other direct allocations to schools; Source: Boston Public Schools All Funds FY18 Budget; EY-Parthenon analysis

Off-Track Youth in BPS High Schools

There is little correlation between the concentration of students with risk factors in a school and the school's allocation of supplemental resources

High school supplemental resources vs. school concentration of need,
FY18



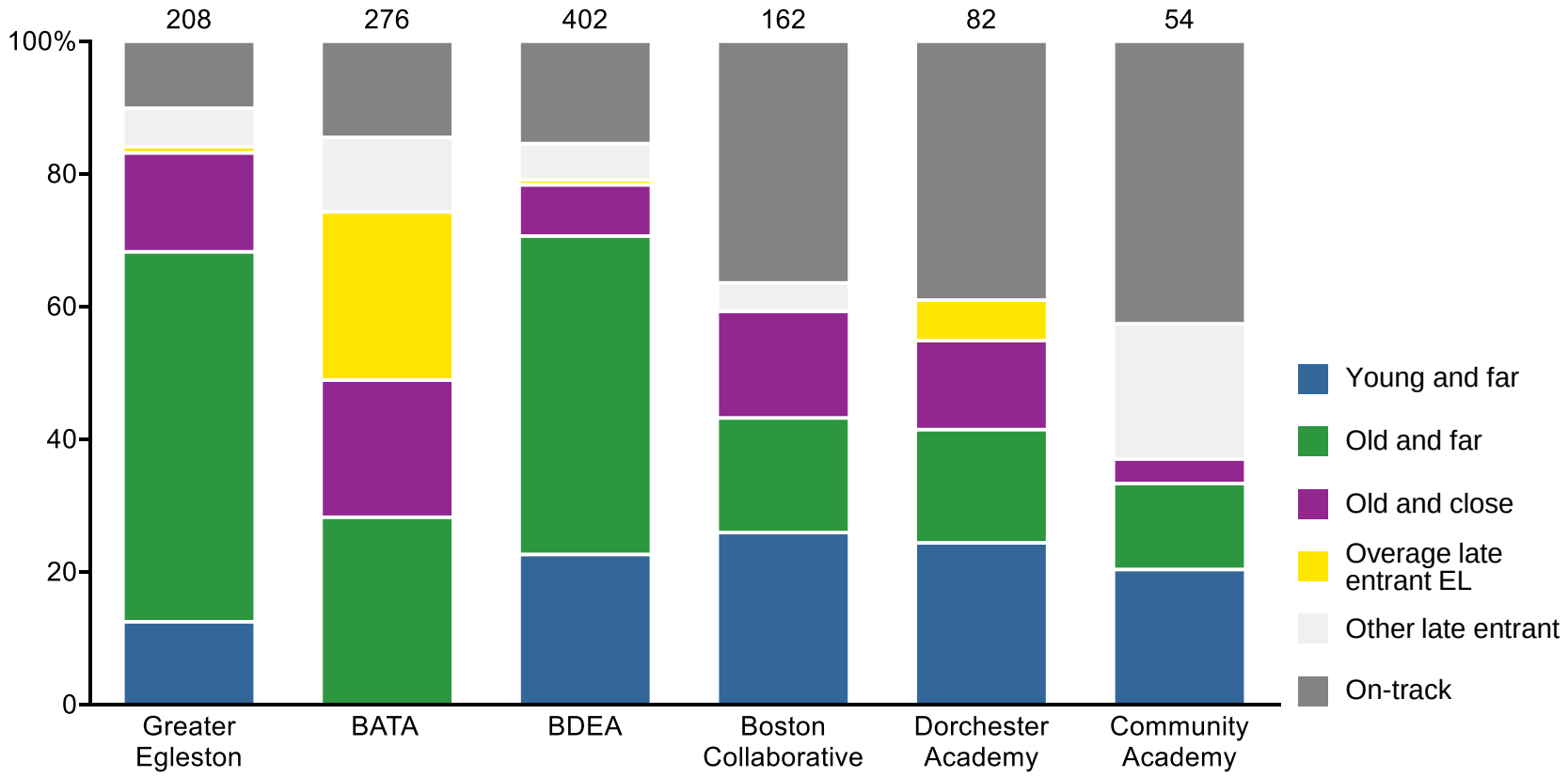
Note: At traditional high schools, % incoming students with risk factors is the share of first-time 9th graders who are already off-track at their entry to high school, or are flagged as having at least one EWI from 8th grade; At alternative high schools, % incoming students with risk factors is the share of students who are off-track at their entry into the alternative school; All student data shown is for the 2015-16 school year; excludes Community Academy, Horace Mann, the Carter Center, and the McKinley Schools given the differentiated funding needs of those programs
Source: BPS Data; EY-Parthenon Analysis

Off-Track Youth in BPS High Schools

Alternative schools have served a highly off-track population with a wide range of needs

Enrollment in alternative education schools by off-track student profile

Snapshot view, SY2015-16



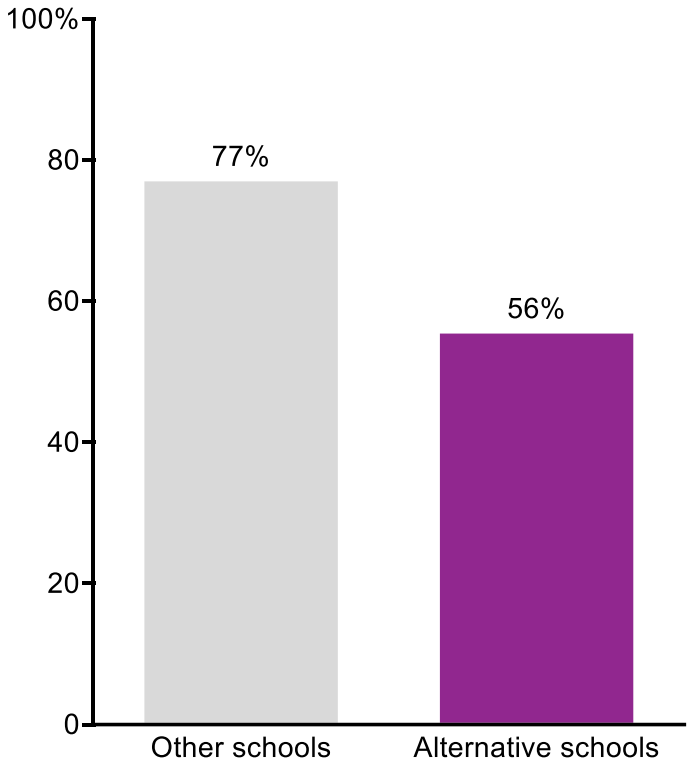
	Greater Egleston	BATA	BDEA	Boston Collaborative	Dorchester Academy	Community Academy
% off-track	90%	86%	85%	64%	61%	57%

Source: BPS data; EY-Parthenon analysis

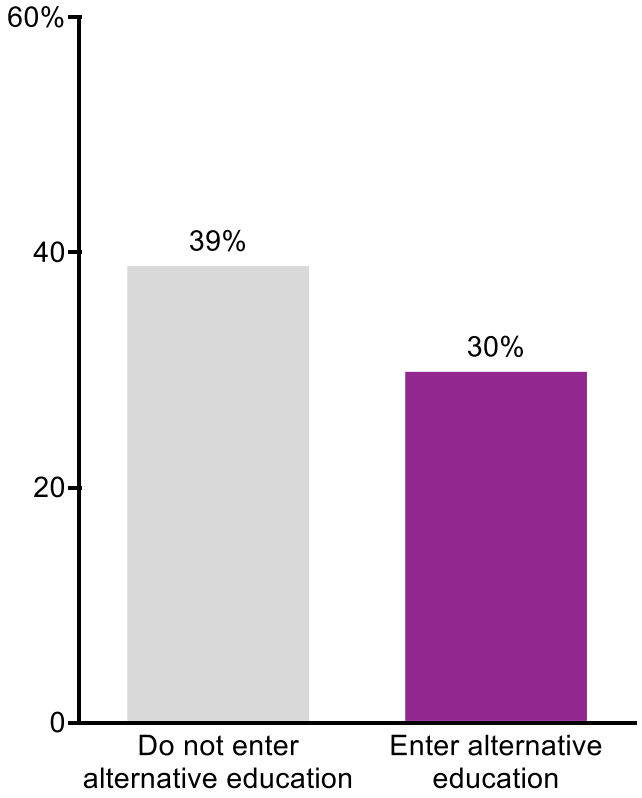
Off-Track Youth in BPS High Schools

Alternative education schools have lower attendance and graduation rates for off-track students

Average attendance rate of off-track students In Alt Ed. programs v. all other schools, *SY2015-16*



Six-year graduation rate of off-track students in Alt. Ed programs v. all other schools, *Class of 2014 Cohort*

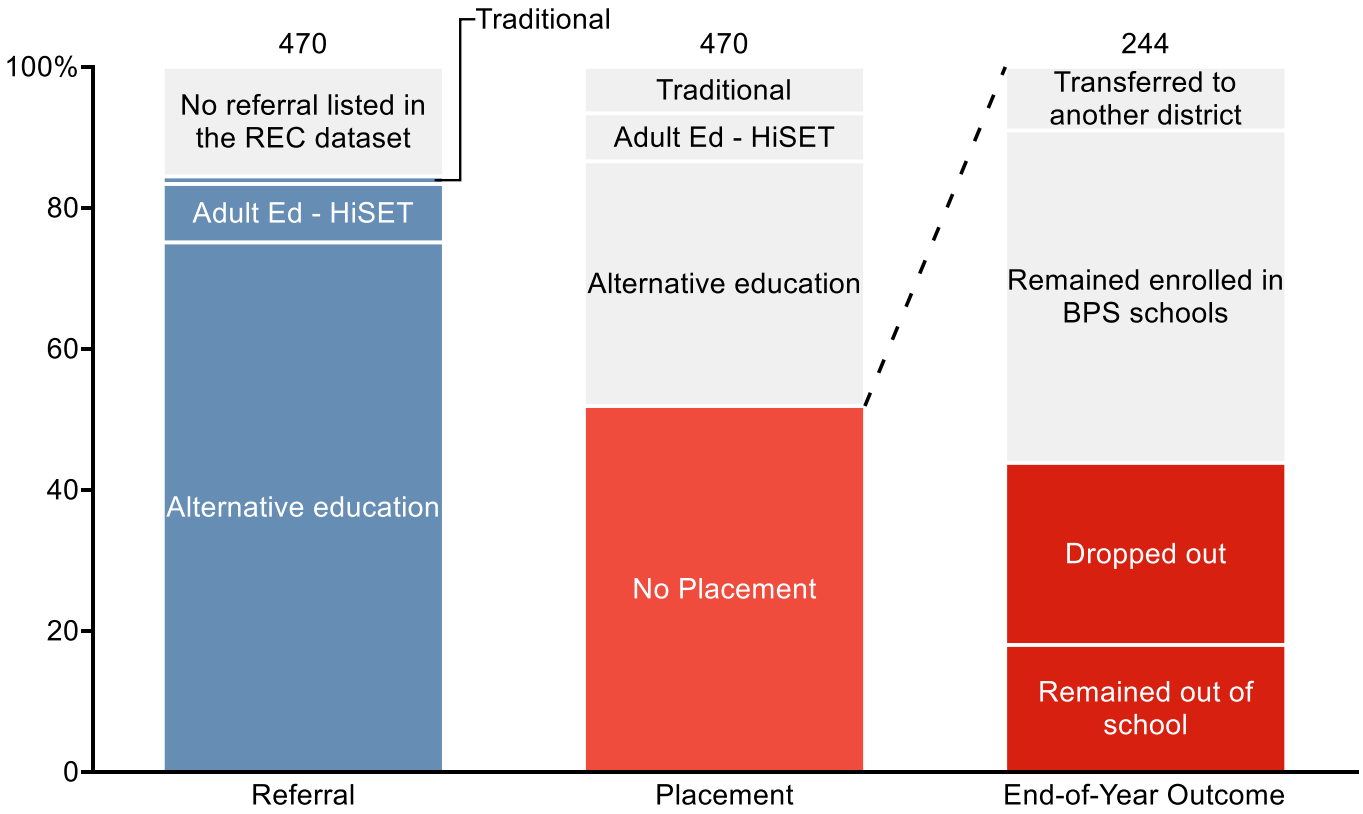


Note: Most Boston Collaborative High School students are not included in the graduation analysis, as Boston Collaborative High School was not represented with a distinct school code until SY2015-2016. Excludes non-diploma bound students.
Source: BPS Data; Parthenon Analysis

Off-Track Youth in BPS High Schools

Students who are referred to an alternative school by the REC often do not receive a placement, and many become or remain disconnected from school

Referrals, placements and end-of-year outcomes of students who interacted with the REC in SY2016-2017,
All SY2016-17 REC interactions



Note: A significant portion of students who did not receive a placement were out of school in the first place, and these students remain out of school when not placed
Source: BPS Data; REC/PIC Data; Parthenon Analysis

How many students are attending a high-quality high school that they and their family chose?

Off-Track Youth in BPS High Schools
Our report will close with five recommendations

What will it take? Guiding principles:

1. **Address fundamental, systemic issues**
2. **Both school level and system level change**
3. **New ongoing approach to high school management**

1 Transform open enrollment and selective schools through a coordinated plan

- Grow/replicate strong, in-demand schools
- Incubate new models
- Redesign the lowest performers
- Align seats with need

2 Overhaul alternative education

- Replace existing seats
- Design schools based on specific needs
- Strengthen and ease access and support

3 Put early warning data in educators' and families' hands

- Develop easy-to-use, timely infrastructure
- Support schools on how to put the data to the right use

4 Use policy to enhance equity and conditions that allow all schools to succeed

- Admissions policy
- Funding
- Student mobility

5 Evolve how the district manages its high schools on an ongoing basis

- Manage the portfolio with continuous improvement mindset
- Clearer autonomy and accountability

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